ABSTRACT

The invention is to provide a non-aqueous electrolyte cell having: the advantage of no risk of igniting, no risk of exploding and catching fire in the event of short circuit, low internal resistance, good low-temperature discharge characteristic, good degradation resistance, good self-extinguishability and flame retardancy, good electrochemical stability, high voltage, high discharge capacity, and which can be manufactured easily. Of the nonaqueous electrolyte cell of the invention that comprises a non-aqueous electrolyte, a positive electrode and a negative electrode. The electrode, the first aspect is such that the nonaqueous electrolyte eontains-may contain lithium ions and a phosphagen phosphazene derivative having a flash point of not lower than 100°C.100°C; the second aspect is such that the The non-aqueous electrolyte-contains may contain a supporting salt, an organic solvent and a phosphagen phosphazene derivative, the lowermost limit of the potential window of the phosphagen-phosphazene derivative is at most +0.5 V, the uppermost limit thereof is at least +4.5 V, and the potential window of the organic solvent is wider than that of the phosphazene derivative phosphagen derivative; the third aspect is such that the _The non-aqueous electrolyte contains may contain a supporting salt and a phosphagen phosphagene derivative whose electroconductivity in a lithium salt solution (0.5 mol/liter) is at least 2.0 mS/cm. 2.0 mS/cm; and the fourth aspect is such that the The non-aqueous electrolyte contains may contain a supporting salt and a phosphagen phosphazene derivative whose dielectric constant at 25°C is at least 15 and the viscosity is at most 20 mPa·s (20 cP).